



A name for Murnong (*Microseris*: Asteraceae: Cichorioideae)

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Introduction

With the publication of the first Asteraceae volume of the Flora of Australia (Wilson 2015), we have a national perspective of the taxonomy of *Microseris* D.Don (Sneddon 2015). The Flora account provides descriptions and complete synonymies for the two species regarded as comprising the genus in Australia, *M. lanceolata* (Walp.) Sch.Bip. and *M. scapigera* Sch.Bip., whereas, in most jurisdictions, only one, *M. lanceolata*, had been recognised since the inclusion of *M. scapigera* as a synonym (e.g. Ross 1990; CHAH 2011).

Sneddon's treatment provides useful and detailed notes under both species, with those relating to *M. lanceolata* being quite extensive. For many years, MEL has recognised three distinct taxa (e.g. Ross 1993; Jeanes 1999, Walsh & Stajsic 2007) but one has remained as an informal taxon only (*Microseris* sp. 3 or *Microseris* aff. *lanceolata* (Foothills)). This has been unfortunate, particularly given that, of the three entities involved, the informally recognised one has long been acknowledged as one of the most important food plants of aboriginal people of south-eastern Australia and for which the Koorie name 'Murnong' (or 'Myrnong') has long been applied (e.g. Gott 1983) in Victoria, and 'Garnggeg' or 'Nyamin' in south-eastern New South Wales (Blackburn *et al.* 2015). The characteristic root system of Murnong, producing a plump, annually replaced tuber, provides both the major food source and a critical taxonomic feature (Fig. 1a). The tubers are commonly described as sweet-tasting, both raw and cooked. Sneddon notes that the 'Murnong form' of *M. lanceolata* is a lowland, spring-flowering, summer-dormant entity whereas montane to alpine forms (concordant with the type of *M. lanceolata*) are summer-

Abstract

An existing name, *Microseris walteri* Gand., is resurrected for one of the most important food plants of aboriginal people of south-eastern Australia and for which the Koorie name 'Murnong' (or 'Myrnong') has long been applied (e.g. Gott 1983) in Victoria, and 'Garnggeg' or 'Nyamin' in south-eastern New South Wales. It is compared with its two Australian congeners. A key to the identification of all three species and photographs of their root systems are provided.

Keywords: Aboriginal food plant, daisy, identification, Nyamin, Garnggeg

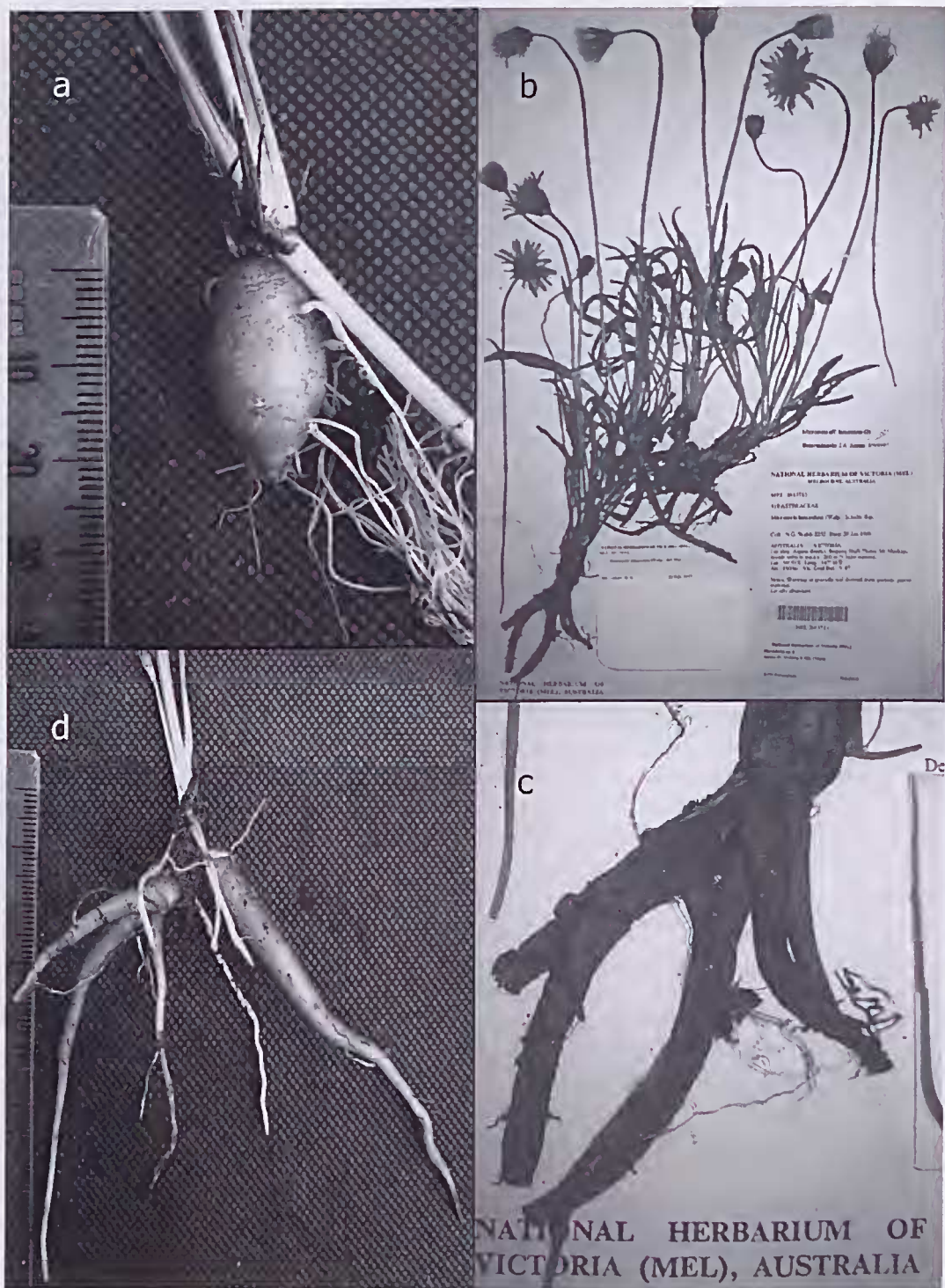


Figure 1. Root systems of Australian *Microseris*. 1a (top left). *M. wolteri*. The pale slender root to the right of the 'mother tuber' will expand to become the replacement tuber after the mother tuber has been exhausted following emergence of the new leaves in spring. (cultivated by the author); 1b (top right). *M. lonceoloto*. Branched, fleshy root system similar to that of *M. scopigero*. (N.G.Wolsh 2252, MEL 2013713); 1c (bottom right). Enlargement of 1b; 1d (bottom left). *M. scopigero*. Several fleshy roots branched just below ground-level. (cultivated by the author)

flowering and winter dormant. It is worth noting that within Murnong there is considerable variation in tuber shape—e.g. plants from north-western Victoria growing in deep sands produce elongated tubers to c. 8 cm long or more (pers. obs.) The root system of *M. lanceolata* sens. str. is fleshy but not tuberous, usually branched near the soil-level and comprises cylindrical or gradually tapering structures (Fig. 1 b,c). Its use as an aboriginal food plant is not reliably reported. I have eaten the roots, both raw and roasted, and found them bitter, slightly fibrous and not particularly palatable. The root system of *M. scapigera* (Fig. 1d) resembles that of *M. lanceolata*. It is not known if the roots of *M. scapigera* were eaten by aborigines, but they are fleshy, only slightly fibrous, and slightly, but tolerably bitter when eaten raw (pers. obs.).

Smyth (1876, p. 171) reported at Coranderk Mission (Healesville, Victoria) that 'the natives' ate the roots of non-native *Hypochaeris glabra* L. ('Nareengnan' in the local language) which does not have tuberous roots. This is interesting as, today, *H. glabra* is not a particularly common plant in these parts (but *H. radicata* L. is), suggesting perhaps misidentification. However Smyth notes that the species listed were identified by Ferdinand Mueller, the Government Botanist at the time, and Mueller was certainly aware of *Microseris* (which he identified as a food plant elsewhere in Victoria in the same work) and *H. radicata*. It is possible that, recognising the similarity between *H. glabra* and *Microseris*, the Coranderk aborigines adapted to the weed as it appeared in the district, suggesting further that they may have been accustomed to consuming non-tuberous species of *Microseris*. Both of these species occur within ca. 50 km of Healesville today, so it is very conceivable that they were known by the Coranderk aborigines and were consumed by them. Often quoted, early reports of plains west of Melbourne carrying large populations of *Microseris* (e.g. Mitchell's 1839 reference

to a 'cichoraceous plant') include comments about their importance as a food plant. Both *M. scapigera* and Murnong are now rare on these plains following extensive early grazing (Lloyd 1862; Clark 1998).

Sneddon's provision of synonymy, and in particular, his interpretation of Gandoger's taxa which were perfunctorily 'described' via a simple key only (Gandoger 1918), has allowed the association to be made between Murnong and one of Gandoger's names. Features of the pappus of Murnong as well as its presumed outbreeding mating system suggest it is closer to *M. lanceolata* than *M. scapigera*. Capitula of typical, montane to alpine *M. lanceolata* and Murnong remain open for a day or more and seed production may be variable, whereas those of *M. scapigera* (at least in Victoria) remain open for only an hour or two and have a high level of seed-set (pers. obs.), suggesting not only inbreeding, but cleistogamy.

After consulting original descriptions, type images and type specimens at MEL of the synonyms provided under *M. lanceolata* — viz *Scorzonera lawrencei* Hook.f., *M. forsteri* Hook.f., *M. latifolia* Gand., *M. forsteri* var. *subplumosa* Benth. and *M. walteri* Gand. — it became obvious that only the latter two represent a tuberous-rooted entity, and while *M. forsteri* var. *subplumosa* is the earlier name, *M. walteri* is the only name available for the taxon at species rank (Art. 11.2 ICN; McNeill et al. 2012) (Fig. 2). Further, *M. forsteri* itself is regarded as a synonym of *M. scapigera* and is based on a New Zealand type.

The following key to the Australian species of *Microseris* is essentially a replication of the key in Jeanes (1999) with further detail of root structure based on field observation, herbarium material and cultivated plants. I have grown plants of *M. scapigera* and *M. walteri* in identical media and conditions and they have replicated the root system of their parents. I haven't had the opportunity to grow *M. lanceolata*, but have examined

Key to Australian species of *Microseris*

- 1 Cypselas mostly 7–10 mm long; pappus scales 30–66 mm, hardly widened at base; ligules to c. 12 mm long; roots several, cylindrical or long-tapered, usually branched shortly below leaves; mostly from basalt plains of western Victoria and elevated sites in Tasmania *M. scapigera*
- 1: Cypselas usually less than 7 mm long; pappus scales to c. 20 mm, noticeably widened at base; ligules usually more than 15 mm long; roots cylindrical or napiform, branched or not; lowland to alpine plants, rarely on basaltic soils 2
- 2 Pappus scales 10–20 mm, c. 0.3–0.5 mm wide at base; fleshy roots several, cylindrical to long-tapered, branching just below ground-level; alpine and subalpine NSW, ACT and Victoria *M. lanceolata*
- 2: Pappus scales usually c. 10 mm, 0.5–1.3 mm wide at base; fleshy root expanding to a solitary, napiform to narrow-ellipsoid or narrow-ovoid, annually replaced tuber; lowlands of temperate southern WA, SA, NSW, ACT, Vic., Tas. *M. walteri*



Figure 2. Holotype of *M. walteri* Gand. (LY 9479, reproduced with permission). Note the spent 'mother tuber' and its replacement tuber on the middle specimen. Other specimens collected without below-ground parts.

numerous examples in the field and the mature root system of these appears uniform.

While based primarily on Victorian specimens, the key, based on herbarium specimens at MEL, appears to be applicable to Australia generally, notwithstanding Sneddon's note about a 'variant' from lowland sites in Tasmania that has unusually short (c. 3 mm long) pappus scales. While discussed under *M. lanceolata*, Sneddon notes this variant 'may be closer to *M. scapigera*'. It is clearly not part of what is here resurrected as *M. walteri*.

Taxonomy

Microseris walteri Gand., *Bull. Soc. Bot. France* 65:52 (1918) (as *Microderis walteri*)

T: Victoria, Sandringham, Sept. 1900, C.Walter s.n.; holo: LY (photo seen).

Microseris forsteri var. *subplumosa* Benth. *Fl. Austral.* 3:676 (1867). T: W. Australia, J.Drummond 5th Coll., 366; holo: K (photo seen); ?iso: MEL (2 sheets).

Microseris sp. 3 sens. J.A.Jeanes in N.G.Walsh & T.J.Entwisle (eds), *Flora of Victoria*, vol. 4, 702 (1999).

Microseris aff. *lanceolata* (Foothills) sens. J.H.Ross, *Census Vasc. Pl. Victoria*, edn 5, pp. 49, 185 (1996).

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